

Open Source Software for the Enterprise

Has OSS become part of the main stream? It's an interesting question and one that will be the subject of debate at *Open Source Software for the Enterprise*, an Xtalks web conference due to take place on October 11. Other areas of discussion will include an evaluation of the risks and benefits of open source software compared with commercial counterparts. In anticipation of the event, Honeycomb Connect unearths some of the key issues of debate.

--Open-source software (OSS) has emerged as perhaps the most prominent face of the open-source movement since becoming the primary platform for the web. These days, commercial software companies like IBM, HP, Novell, Oracle and Red Hat are backing OSS. Perhaps this is a means of competing with other commercial software giants but the endorsements clearly express open source's move into the mainstream. Just recently, in a reconciliatory move, Microsoft published the Open Specification Promise saying it would not sue anyone who creates software based on patent protected Web services technology. The gesture seems to emphasize how commercial vendors are coming to terms with open source development models.

Harvard Business School professors Ramon Casadesus-Masanell and Pankaj Ghemawat suggest in their research paper, published in June 2005, that OSS is unlikely to displace traditional software from its market leadership position (based upon a Linux versus Windows model). The reason, they say, is because OSS comes from behind in terms of market share thanks to the installed base advantage that Windows has over its competitors. Nevertheless, today, there are open-source alternatives in virtually every category of software and according to a 2005 CIO Insight research study 81 percent of firms surveyed had deployed or are considering deploying open source applications.

Cost savings are generally reported as the main advantage of switching infrastructures over to open-source. However, this standpoint has come under scrutiny. The CIO Insight research also claims that only 64 percent of companies actually report lower total cost of ownership by moving to open-source systems and applications. Hidden costs may include personnel training, hardware costs, consulting and ongoing maintenance. It's also possible that the cost of migrating from traditional proprietary software, for which companies have yet to realize a full ROI, deters companies from implementing new software.

Open-source software providers will argue that their applications prevent users getting locked-in to a single vendor solution. The companies surveyed by CIO Insight also report other value adding benefits of OSS including sparking innovation within the company and the potential to offer strategic advantage over competitors.

Take the example of Roland Whitehead, IT Director of the London based auction house Bonhams, interviewed in CIO magazine. He built a homegrown auction management system using Linux and other open-source applications. While saving the company money, the trading system, dubbed A3, supported growth and allowed Bonhams to consolidate all the different trading systems that Bonham obtained from its acquisitions after 2000. CIO reports that the cost of customizing commercial enterprise software turned Whitehead off that idea and he says the Linux servers are so reliable he only needs two systems analysts to support them. The evidence put forward here suggests that the agility and flexibility of OSS has offered Bonhmas a competitive advantage.

Studies have also shown that, in some cases, the open-source application's code quality is actually of a higher standard than that of comparable proprietary code. This is usually attributed to the "release early,

release often" mantra and the huge community of software testers who use trial versions in a variety of applications and environments, and report bugs, which allows problems to be fixed quickly. However, according to CIO magazine, most companies don't want to spend time and money on developing their own software, particularly if this is not a core competency, so they opt for packaged software.

The example above highlights an important feature of the OSS ecosystem—the huge community of highly skilled developers who write source code often for altruistic reasons. This community is the life blood of OSS and the predominant way in which software is brought into many firms. In the CIO Insight study, the most significant problem in implementing OSS was user reluctance to switch from familiar proprietary systems. Insufficiently skilled IT staff to support many different open-source applications can be a major obstacle to adoption.

For these reasons, a few open source providers have moved into the commercial space by offering technical support systems for OSS. The customer support is usually of a high standard because users can take the code (which is open) to another service provider if relationships turn ugly. The alternative to commercial support is going straight to the OSS community itself, the usual points of contact are email lists and forums (like JIRA), and this model provides a useful fallback that isn't available with traditional software alternatives.

Bernard Golden, a consultant dedicated to enterprise integration of open-source, describes the irony of the vendor/customer relationship in his blog (accessible via CIO.com). The common objection from CIOs, expressed by the truism "one throat to choke," is that customer support with open-source—a product of the scattered development community—is not equivalent to proprietary vendors. "People are complaining that open source doesn't deliver the same level of inadequate support that proprietary vendors deliver," says Golden .

Some may be surprised to hear that OSS does have a license, or more commonly a conglomeration of different licenses. The most prominent example is a General Public License (GPL). A firm seeking interoperability between open-source applications and proprietary software should consider the legal requirements, which can get confusing. For example when distributing software built with open-source outside of the organization these applications can inherit licensing parameters. Most open-source companies offer OSS products under a dual licensing model. Under this model software is available at no cost through GPL and is also available through a commercial license so that companies can develop and distribute applications without opening source code to the public .

Today's organizations are often looking for software that works with a wide range of hardware devices and that can communicate with a variety of software applications. This presents another challenge because OSS tends to fall into the custom software category while proprietary software relies on the "off the shelf" model. Put simply, the greater the level of customization, the less likely a piece of software is to work with a broad range of hardware and software, further incentive for some companies to consider support for their open-source ventures.

Implementing hundreds of open source products in a corporate environment presents its own problems. Installing, integrating and configuring all these programs has become a time and labor intensive process. In response, Openlogic provides certification, updates, and support to help with the deployment of OSS applications. The company distributes open-source components, mainly infrastructure and web development tools, and provides a technical support model. "Basically we provide a platform for customers to have control over the open-source and automate some of the more time consuming issues," says Mark Winz, Vice President of Sales. For each component it provides, Openlogic has contractual relationships with committer level members of corresponding open-source communities, meaning the experts they turn to are vetted by the open-source community and qualified to make changes to source code. Openlogic provides

compensation to the committers to help their customers with technical issues. Most customer queries can be resolved by Openlogic's staff, in fact, only 15 percent of customer calls end up going to the expert community. By cozying up to the development community in this way, Openlogic's offering is viewed in light of its contributions to the open-source community. By offering a single source for open-source content and support, the company provides balance between commercial-style software support and the benefits of open-source innovation.

Second generation open-source companies, like JBoss and MySQL, try to support both open source values and corporate customer needs by standing behind their products and offering their own support services. The JBoss Enterprise Middleware Suite (JEMS) is a collection of enterprise software applications for service-oriented architecture (SOA) distributed via the open-source platform. "We probably do most of our business in government, telecommunications and finance," says Rob Morrison, EMEA Marketing Manager. The French Tax Office is a JBoss client; people in France can now submit their tax forms via JBoss middleware. JBoss also provides customer support, tools, consulting and training via subscription services. Its online services allow users to interact directly with the software development community and voice their opinions on issues of concern. The goal is to distribute software in a downloadable format quickly so that users themselves can critique it, providing a quality improvement process. JBoss says the real time feedback has the potential for quicker product improvements and stabilization of technology.

When the MySQL database was released in 1995 a few criticized the platform because it lacked some of the features commonly expected in a traditional database but the forward looking web development community saw that MySQL matched their needs perfectly. Since then, MySQL's database management software has progressively moved within the enterprise and new features have been added. Today the software powers websites, business enterprise applications and packaged software applications. Weather.com, one of the busiest website in the world, runs almost 100 percent of its infrastructure on MySQL's open-source database. Other customers include: Google, HP and Nasa; and Web 2.0 companies like Delicious, Digg, and Wikipedia; as well as SMEs that have difficulty scaling up with proprietary software vendors. Software is available via dual licensing with MySQL Community or MySQL Network. "The community edition follows the release early/release often model and it's tested by the open-source community so we have new versions and new features," explains Bertrand Matthelié, Director of Marketing. "At a point we freeze the code and produce our enterprise version. So we take the code, go through extra QA testing and we certify it with platform vendors such as Red Hat or Novell." MySQL also dangles IT professionals a carrot in the form of the database migration toolkit that has services for converting and transferring data from proprietary databases over to open-source. Being a second generation open-source company MySQL also offers technical support from software developers themselves. Consequently, MySQL has grown to become the world's most popular open-source database with around 10 million installations .

The Harvard Business School professor's economic model suggests there may be a big enough pie for open-source and proprietary software companies to coexist. And although some people express doubt that open-source developers will ever produce an application that rivals SAP, what remains perfectly clear is that open-source is here to stay.

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